

Listing of Claims

1. – 16. (Canceled)

17. (Previously Presented) A method of making a reinforced smooth cementitious board having a cement skin adjacent to an outer face, comprising:

(a) depositing a reinforcement fabric and a layer of hydraulic cementitious material, one on the other, wherein the reinforcement fabric comprises an open mesh united with a thin, porous nonwoven web for penetration by a portion of the layer of hydraulic cementitious material, and wherein the thin, porous nonwoven web comprises alkali resistant polymer fibers having thereon a hydrophilic material to enhance wetting of the thin, porous nonwoven web by the layer of hydraulic cementitious material, and adhesion of the thin, porous nonwoven web to the layer of hydraulic cementitious material, and continuity of the layer of hydraulic cementitious material about the reinforcement fabric;

(b) penetrating the thin, porous nonwoven web by said portion of the layer of hydraulic cementitious material, to embed the reinforcement fabric in the layer of hydraulic cementitious material at a depth from the outer face with continuity of the layer of hydraulic cementitious material about the reinforcement fabric, and to form the cement skin adjacent to the outer face with said portion of the layer of hydraulic cementitious material; and

(c) curing the layer of hydraulic cementitious material to form a layer of hardened cementitious material imbedding the reinforcement fabric at a depth from the outer face, wherein a portion of the layer of hardened cementitious material comprises the cement skin adjacent to the outer face.

18. (Previously Presented) The method of claim 17, wherein the layer of hydraulic cementitious material comprises a cementitious matrix material, further comprising:

Amendment in response to

Restriction Requirement dated October 31, 2006

penetrating the reinforcement fabric by the portion of the layer of hydraulic cementitious material, wherein the portion of the layer of hydraulic cementitious material comprises a portion of the cementitious matrix material.

19. (Previously Presented) The method of claim 17, further comprising:

forming the open mesh by encapsulating glass fibers with an alkali resistant material to provide encapsulated glass fibers, and joining the encapsulated glass fibers with a binder at intersection areas thereof within the open mesh; and

uniting the open mesh and the nonwoven web to comprise the reinforcement fabric.

20. (Previously Presented) The method of claim 17, further comprising:

forming the open mesh by coextruding an alkali resistant material with glass fibers to provide sheathed glass fibers sheathed by the alkali resistant material, and joining the sheathed glass fibers at intersection areas thereof within the open mesh; and

uniting the open mesh and the nonwoven web to comprise the reinforcement fabric.

21. (Currently Amended) The method of claim 17, further comprising:

forming the open mesh by wrapping glass fibers with fibers of an alkali resistant material, and applying heat to fuse the fibers of the alkali resistant material and; to provide sheathed glass fibers sheathed by the alkali resistant material, and joining the sheathed glass fibers at intersection areas thereof within the open mesh; and

uniting the open mesh and the thin, porous nonwoven web to form the reinforcement fabric.

Amendment in response to

Restriction Requirement dated October 31, 2006

22. (Previously Presented) The method of claim 17, further comprising:

forming the reinforcement fabric by uniting the open mesh and the thin, porous nonwoven web, wherein the alkali resistant polymer fibers, having thereon the hydrophilic material, comprise polypropylene fibers having thereon the hydrophilic material.

23. (Previously Presented) The method of claim 17, further comprising:

forming the reinforcement fabric by uniting the open mesh and the thin, porous nonwoven web, wherein the alkali resistant polymer fibers, having thereon the hydrophilic material, comprise, a polymer or copolymer of, olefin, ethylene, butylene, vinyl, styrene or butadiene, having thereon the hydrophilic material, having thereon the hydrophilic material.

24. (Previously Presented) The method of claim 17, further comprising:

forming the nonwoven web as either a spun bonded web of the fibers having the hydrophilic material thereon or a carded web of the fibers having the hydrophilic material thereon; and

uniting the nonwoven web and the open mesh to comprise the reinforcement fabric.

25. (Previously Presented) The method of claim 17, further comprising:

forming the nonwoven web as either a spun bonded web of the fibers or a carded web of the fibers;

forming the open mesh by encapsulating glass fibers with an alkali resistant material to provide encapsulated glass fibers, and joining the encapsulated glass fibers at intersection areas thereof within the open mesh; and

uniting the open mesh and the nonwoven web to comprise the reinforcement fabric.

26. (Previously Presented) The method of claim 17, further comprising:

uniting the open mesh and the nonwoven web by heat fusing them together.

Amendment in response to

Restriction Requirement dated October 31, 2006

27. (Previously Presented) The method of claim 17, further comprising:

uniting the open mesh and the thin, porous nonwoven web by adhesive or stitching.

28. (Previously Presented) The method of claim 17, further comprising:

prior to depositing the reinforcement fabric and the layer of hydraulic cementitious material one on the other, coating one or more of, surfactants, hydrophilic compounds, foam boosters/stabilizers and polar polymer topical solutions on the open mesh and on the thin, porous nonwoven web that comprises the alkali resistant polymer fibers having thereon the hydrophilic material.

29. (Previously Presented) The method of claim 17, further comprising:

prior to depositing the reinforcement fabric and the layer of hydraulic cementitious material one on the other, applying a slurry having a cement powder and one or more of, hydrophilic additives, wetting agents, foaming agents and foam boosters to either or both of the open mesh and the thin, porous nonwoven web; and

drying the slurry.

30. (Previously Presented) The method of claim 17, further comprising depositing the layer of hydraulic cementitious material onto the reinforcement fabric thereby depositing one on the other; and

compacting the layer of hydraulic cementitious material and the reinforcement fabric.

31. (Previously Presented) The method of claim 30, further comprising:

forming the reinforcement fabric by uniting the open mesh and the thin, porous nonwoven web, wherein the alkali resistant polymer fibers, having thereon the hydrophilic material, comprise polypropylene fibers having thereon the hydrophilic material.

Amendment in response to

Restriction Requirement dated October 31, 2006

32. (Previously Presented) The method of claim 30, further comprising:
prior to depositing the layer of hydraulic cementitious material onto the reinforcement fabric, coating one or more of, surfactants, hydrophilic compounds, foam boosters/stabilizers and polar polymer topical solutions on the open mesh and on the thin, porous nonwoven web that comprises the alkali resistant polymer fibers having thereon the hydrophilic material.

33. (Previously Presented) The method of claim 30, further comprising:
prior to depositing the layer of hydraulic cementitious material onto the reinforcement fabric, applying a slurry having a cement powder and one or more of, hydrophilic additives, wetting agents, foaming agents and foam boosters to either or both of the open mesh and the thin, porous nonwoven web; and
drying the slurry.

34. (Previously Presented) The method of claim 17, further comprising:
depositing the reinforcement fabric onto the layer of hydraulic cementitious material thereby depositing one on the other; and
compacting the reinforcement fabric and the layer of hydraulic cementitious material.

35. (Previously Presented) The method of claim 34, further comprising:
prior to depositing the reinforcement fabric onto the layer of hydraulic cementitious material, coating one or more of, surfactants, hydrophilic compounds, foam boosters/stabilizers and polar polymer topical solutions on the open mesh and on the thin, porous nonwoven web that comprises the alkali resistant polymer fibers having thereon the hydrophilic material.

36. (Previously Presented) The method of claim 34, further comprising:

Amendment in response to

Restriction Requirement dated October 31, 2006

prior to depositing the reinforcement fabric onto the layer of hydraulic cementitious material, applying a slurry having a cement powder and one or more of, hydrophilic additives, wetting agents, foaming agents and foam boosters to either or both of the open mesh and the thin, porous nonwoven web; and

drying the slurry.

37. (New) The method of claim 17, further comprising:

forming the open mesh, either by coextruding an alkali resistant material with glass fibers to provide sheathed glass fibers sheathed by the alkali resistant material, or by wrapping glass fibers with fibers of an alkali resistant material and applying heat to fuse the fibers of the alkali resistant material to provide sheathed glass fibers sheathed by the alkali resistant material, and joining the sheathed glass fibers at intersection areas thereof within the open mesh; and

uniting the open mesh and the nonwoven web to comprise the reinforcement fabric.